

**CAAA Steering Committee
Partners:**

Butzel Family Center

**Community Health and Social
Services (CHASS)**

**Detroit Hispanic Development
Corporation**

**Detroiters Working for
Environmental Justice**

Friends of Parkside

**Kettering/Butzel Health
Initiative**

Latino Family Services

**United Community Housing
Coalition**

**Warren/Conner Development
Coalition**

Detroit Health Department

Henry Ford Health System

**University of Michigan
School of Public Health**

**University of Michigan
School of Medicine**

**Michigan Department of
Agriculture Pesticide & Plant
Pest Management**

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Fact Sheet

Michigan Center for the Environment and Children's Health



Community Action Against Asthma

The Michigan Center for the Environment & Children's Health (MCECH) is a community-based participatory research initiative investigating the influence of environmental factors on childhood asthma. MCECH involves collaboration among the University of Michigan Schools of Public Health and Medicine, the Detroit Health Department, the Michigan Department of Agriculture, Plant and Pest Management Division, and nine community-based organizations in Detroit (Butzel Family Center,

Community Health and Social Services Center - CHASS, Detroiters Working for Environmental Justice, Detroit Hispanic Development Corporation, Friends of Parkside, Kettering/Butzel Health Initiative, Latino Family Services, United Community Housing Coalition and Warren/Conner Development Coalition), and Henry Ford Health System. MCECH, established in 1998, is funded by the National Institute of Environmental Health Sciences (NIEHS) and the U.S. Environmental Protection Agency (EPA). Community Action Against Asthma (CAAA) is a part of MCECH.

The Community Action Against Asthma Steering Committee

An important part of CAAA is the Steering Committee. It is made up of representatives from all of the partner organizations listed above. The Steering Committee has adopted and adheres to a set of community-based participatory research principles and is responsible for all major decisions regarding project design and implementation.

Accomplishments of Community Action Against Asthma

Community Action Against Asthma is examining what triggers asthma in children's homes and neighborhoods and involves intervention and exposure components.

Household Intervention

All 300 families who are participating in the project completed the adult baseline questionnaire, the household environmental assessment, and dust collection to look for allergens. A majority of the children also completed a child baseline and had an allergy skin test. Participating households are randomly divided into two "waves," with approximately 150 families in each wave. The program began for the first wave in March 2000 and begins about a year later for wave two families. Since the household intervention began, through home visits by Community Environmental Specialists, wave one families have:

- received education on asthma;
- received a vacuum cleaner with a HEPA filter;
- received covers for the mattress pad, box springs, and pillow for the child's bed;
- received cleaning supplies (mop, bucket, soap, etc.);
- been referred to other local agencies for other needs;
- developed a plan to reduce household asthma triggers based on what the child is allergic to, what allergens were found in the dust in their homes, answers to selected baseline questions, and family input.

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The issue of pests--particularly cockroaches and mice, which are known asthma triggers--is also being addressed. Community Environmental Specialists were trained and then certified in an environmentally friendly system called, Integrated Pest Management (IPM). They are treating homes in the project that need IPM. Also, a professional company is working with CAAA to treat those homes where the pest problem is especially severe, using IPM.

Exposure Assessment

Six seasonal assessments of environmental exposure and asthma status have been conducted. They consist of:

- daily air quality measurements (outdoor and indoor) which are collected at two elementary schools;
- personal monitoring, which is done for a sub-set of children for a one-week period each season;
- indoor air sampling, where machines with special filters are installed in the homes of a sub-set of children to obtain indoor air quality information during one week each season;
- measurements of lung functioning, which are taken through use of an "Airwatch Monitor," a device distributed to families each season; and
- a daily diary where families record asthma symptoms and medication use, which is kept during the seasonal assessment.

The Neighborhood Checklist

In preparation for the neighborhood intervention, teams of Detroit residents were trained to use a neighborhood checklist, where they inventoried and then recorded environmental stressors and assets in the neighborhoods involved in CAAA, which includes the eastside and southwest sides of Detroit. The specific stressors and assets were developed through literature review, observation, and suggestions from CAAA Steering Committee members and other community members. Examples of stressors are: abandoned houses or cars, litter, vacant lots, stray animals, motor vehicle noise, or junkyards. Assets, on the other hand, include such things as parks, playgrounds, and block club lamps. Using the GIS (Global Information Systems) process, participant buffer zones within a ¼ mile radius of each neighborhood examined were compiled and mapped. Thirty-one different stressors added together, tallied 15,000 incidences of one of the stressors. This information was plotted on maps providing a visual verification of environmental problems and assets. Verbal reports from raters suggested that there were big differences between neighborhoods with and without block clubs. Also, raters used information collected to report problems to appropriate city officials so they could take action.

One goal of the checklist project was to see whether there is any relationship between stressors observed through the checklist and those perceived through interviews with community members. Closed-ended interviews were conducted with 208 study participants and a small sample of community members also participated in in-depth qualitative interviews to examine this question. One finding was that people with more stressors reported more problems with general health. Also, their sense of community decreased when there were more annoyances and blight stressors.

One challenge to this work is the ever-changing nature and characteristics of neighborhoods, from hour-to-hour, day-to-day, and week-to-week, as well as differences between weekdays and weekends. CAAA plans to follow the neighborhoods by repeating the inventory to examine changes over time.

The data collected through the neighborhood checklist project has a number of potential uses. For example, it could be used to pictorially demonstrate to policy-makers environmental problems affecting the physical and mental health of Detroit's citizens. The method of collecting this information could also be taught to community groups, who might want to conduct their own inventories on a regular, ongoing basis to track changes in their neighborhoods.